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P. G. C.
ACT OF INCORPORATION,

LETTERS PATENT,

AND

REPORT OF THE BOARD OF MANAGERS

TO

THE STOCKHOLDERS

OF THE

McKEAN AND ELK LAND AND
IMPROVEMENT COMPANY.

MARCH, 1856.

TO WHICH IS APPENDED

A TOPOGRAPHICAL AND GEOLOGICAL REPORT, BY A CIVIL ENGINEER.

PHILADELPHIA:
PRINTED BY T. K. AND P. G. COLLINS.
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OFFICERS.

President.

JOHN C. CRESSON.

Directors.

JOHN C. CRESSON,
HENRY M. WATTS,
JOHN K. KANE,
SAMUEL MASON,
MORDECAI L. DAWSON,
FREDERICK FRALEY,*
JOHN LIVEZEY.†

Secretary and Treasurer.

WILLIAM BIDDLE.

* In place of JEREMIAH HACKER, resigned.

† In place of JAMES R. GREEVES, resigned.

A N A C T

TO INCORPORATE THE McKEAN AND ELK LAND
AND IMPROVEMENT COMPANY.

WHEREAS, Samuel M. Leiper died seized of an undivided fourth part of a large body of unimproved lands in the counties of Elk and McKean, in this Commonwealth, and entitled to receive a fourth part of the proceeds of a sale of said lands under an executory agreement, which, by reason of the failure of the contracting parties to pay, was afterwards rescinded:

AND WHEREAS, The other owners of said lands are desirous of converting their respective interests therein into the Capital Stock of a Corporation hereby established:

AND WHEREAS, The interests of the widow and heirs of the said Samuel M. Leiper would be greatly injured by the sale of said lands under proceedings in partition which are now threatened by the other owners, and inasmuch as the executors of the said Samuel M. Leiper have no authority in law to convey the same to the said corporation, and receive, as the other owners are about to do, payment in the Stock of said Corporation, therefore—

SECTION 1. Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsyl-

vania in General Assembly met, and it is hereby enacted by the authority of the same, That William A. Irvine, trustee of Samuel M. Leiper, or John K. Kane, and others, executors of the said Samuel M. Leiper, be, and they are, hereby authorized to sell and convey by good and sufficient deeds in fee simple or otherwise, to the Company hereinafter incorporated, all their said undivided interest and estate, whether it be personal or real, which he the said Samuel M. Leiper held in his lifetime to the said lands, or which they now hold, and to receive in payment therefor the stock of said Corporation, and to sell said stock, or any part thereof, and convert the proceeds thereof into other securities at their discretion: *Provided*, That the same shall be held by them in the same manner and for the same purposes and trusts as the said lands or their interests therein are now held.

SECTION 2. That Henry M. Watts, John K. Kane, Frederick Fraley, John C. Cresson, Samel Mason, John Livezey, Joseph Cresson, Jeremiah Hacker, Mordecai L. Dawson, Samuel Welsh, James R. Greeves, J. Pemberton Hutchinson, William Biddle, Thomas Struthers, and the executors of Samuel M. Leiper, deceased, and their associates, successors, and assigns, be, and they are hereby constituted a body politic and corporate, under the name, style, and title of the McKean and Elk Land and Improvement Company, by which name the said corporators shall have perpetual succession, and enjoy all the privileges, incidents, and franchises usually pertaining to a Corporation and not inconsistent with the powers and duties hereinafter set forth.

SECTION 3. That the above-named persons, or such of them as shall by signature accept this Charter, shall

meet as soon as convenient, after the passage of this act, and after giving reasonable notice of the time and place of a future meeting for the purpose of considering the provisions of this act, and in case of the acceptance of the same, shall proceed to elect by ballot seven of their number to serve as directors for the term of one year thereafter, and until their successors shall be duly elected; and annually thereafter, at such time and place as shall be appointed by the Directors, to serve for one year, and until their successors shall be duly elected; and each share of Stock shall entitle the holder thereof to one vote. The Directors so chosen shall elect one of their number as President of the Corporation, and all other officers and agents of the Corporation shall be elected and appointed as shall be prescribed by the By-Laws. Upon notice of the acceptance of the provisions of this act, and of the due organization of the Corporation, to the Governor of this Commonwealth, there shall be granted in the usual form prescribed by law, letters patent to said corporators.

SECTION 4. That it shall be lawful for the said Corporation to have and to hold all the lands now owned and in possession of the said corporators herein named, who shall accept this Charter, in the counties of McKean and Elk, in this Commonwealth, and the same to value and convert into a common stock, which shall forthwith be divided into a convenient number of shares, so as to apportion the same among the aforesaid owners according to their respective interests in the said lands, and for which shares certificates of Stock shall be issued to each of them, signed by the President, with the corporate seal thereto affixed, and attested by the Treasurer;

such certificates shall be issued and made transferable as the Directors may prescribe by their By-Laws, and the shares of Stock so created shall for all purposes be deemed and treated as personal estate.

SECTION 5. That it shall be the duty of the Directors to grant, bargain, and sell the said lands in such quantities and at such prices as may be agreed upon betwixt them and any purchaser or purchasers thereof, and to receive any moneys, mortgages, or other securities, including the certificates of Stock of this Corporation in payment of the same, and to cause the President to sign and affix the corporate seal, attested by the Treasurer, to any covenant, deed, or other assurance necessary in law for granting title to the same, as often as all or any portion of said lands are sold or otherwise disposed of: *Provided*, That the said Corporation shall sell and dispose of at least one-half of all their lands within ten years, and the remainder, except two thousand acres thereof, within twenty years from the date hereof.

SECTION 6. That it shall be lawful for the said Corporation to demise and let for a period or periods, together not exceeding twenty years, to such person or persons as may apply for the same, and upon such terms as may be agreed upon, any of the said lands, and the right and privilege of mining, taking, and carrying away the iron ore, coal, and other minerals and materials, from the said lands; and to aid in the development of the minerals and other materials, the use and transportation of them to market, and to promote the clearing and settlement of the country, it shall be lawful for the said Corporation to employ their capital in constructing such railways, not exceeding twenty miles in length, as may

be necessary from such mines to intersect the Sunbury and Erie Railroad, or the Alleghany Valley Railroad, subject, nevertheless, to the general law relating to the construction of railroads. The said Company is hereby authorized to create a Capital Stock of one hundred thousand dollars for the purposes specified in this section, and shall pay to the Commonwealth a tax of one-half of one per centum on said amount, in four equal annual instalments; the first instalment to be paid in one year from the date of the organization of the Company.

SECTION 7. That all moneys, mortgages, and other securities for the payment of money shall be paid and delivered to the Treasurer, who shall have the custody of the same, and keep an accurate account thereof in such book or books as may be provided for the purpose, he giving such security for the faithful performance of his duties as may be required by the By-Laws. Dividends of the proceeds of sales of lands and other moneys shall be made among the shareholders as often as it shall seem advisable to the Directors, and at least once in every year; and when the proceeds of the sale of lands are paid to the holders of certificates of Stock, such certificates of Stock shall be surrendered to the said Corporation and cancelled, and new certificates issued according to a uniform rule of equitable adjustment of the rights of the Shareholders, to be established by the By-Laws, so that whenever the whole of said lands shall have been sold the certificates representing the same shall have been entirely exhausted and cancelled.

SECTION 8. That it shall be lawful for the said Directors, or a majority of them, and of whom a majority

shall constitute a quorum, to adopt a common seal, with appropriate device, for the use of said Corporation, and the certificates of Stock and other official acts of the Corporation shall be authenticated by affixing the same, and to enact such By-Laws and regulations as may be expedient for conducting and regulating the affairs of said Corporation: *Provided*, That the same shall not be inconsistent with the Constitution and laws of this Commonwealth.

SECTION 9. That the Legislature reserves the right to amend or repeal this act if the same shall hereafter be considered incompatible with the general good of the Commonwealth, but in such wise, nevertheless, as to do no injustice to stockholders, purchasers, and lessees of the said lands.

RICHARDSON L. WRIGHT,
Speaker of the House of Representatives.
WM. M. PIATT,
Speaker of the Senate.

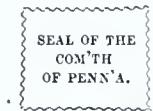
APPROVED, the sixth day of February, one thousand eight hundred and fifty-six.

JAMES POLLOCK.

LETTERS PATENT.

Pennsylvania, ss:

JAS. POLLOCK.



In the name and by the authority of the Commonwealth of Pennsylvania, James Pollock, Governor of the said Commonwealth,

To all to whom these presents shall come, sends greeting:—

WHEREAS, By the second and third sections of an act entitled "An Act to incorporate the McKean and Elk Land and Improvement Company," approved the sixth day of February, A. D. one thousand eight hundred and fifty-six, it is enacted and provided as follows, to wit:—

"SECTION 2. That Henry M. Watts, John K. Kane, Frederick Fraley, John C. Cresson, Samuel Mason, John Livezey, Joseph Cresson, Jeremiah Hacker, Mordecai L. Dawson, Samuel Welsh, James R. Greeves, J. Pemberton Hutchinson, William Biddle, Thomas Struthers, and the Executors of Samuel M. Leiper, deceased, and their associates, successors, and assigns, be and they are hereby constituted a body politic and corporate under the name, style, and title of 'The McKean and Elk Land and Improvement Company,' by which name the said Corporators shall have perpetual succession and enjoy all the privileges incident and franchises usually

pertaining to a Corporation and not inconsistent with the powers and duties hereinafter set forth."

"SECTION 3. That the above-named persons, or such of them as shall by signature accept the Charter, shall meet as soon as convenient after the passage of this act, and, after giving reasonable notice of the time and place of a future meeting for the purpose of considering the provisions of this act, and in case of the acceptance of the same, shall proceed to elect by ballot seven of their number to serve as Directors, for the term of one year thereafter, and until their successors shall be duly elected, and annually thereafter at such time and place as shall be appointed by the Directors, to serve for one year, and until their successors shall be duly elected, and each share of stock shall entitle the holder thereof to one vote. The Directors so chosen shall elect one of their number as President of the Corporation, and all other officers and agents of the Corporation shall be elected and appointed as shall be prescribed by the By-Laws. Upon notice of the acceptance of the provisions of this act, and of the due organization of the Corporation to the Governor of this Commonwealth, there shall be granted in the usual form prescribed by law, Letters Patent to said Corporators."

Now know ye, That I, James Pollock, Governor of the said Commonwealth, do therefore issue these Presents, which I have caused to be made patent and sealed with the great seal of the State, certifying that the said Company has complied with the requisitions and provisions of the above recited Act of the General Assembly of this Commonwealth and has become a Corporation by virtue of the same, by the name, style, and title

of "THE MCKEAN AND ELK LAND AND IMPROVEMENT COMPANY," subject to all the duties, requisitions, and restrictions specified and enjoined in and by the said Act of the General Assembly, and all other laws of this Commonwealth.

Given under my hand, and the great seal of the State, at Harrisburg, this twenty-third day of February, in the year of our Lord, one thousand eight hundred and fifty-six, and of the Commonwealth the eightieth.

By the Governor:

(Signed)

A. G. CURTIN,
Sec'y of the Commonwealth.

OFFICE OF THE MCKEAN AND ELK LAND AND IMPROVEMENT CO.,
Philadelphia, March 10, 1856.

REPORT.

THE area of the lands of our Company contains about one hundred and twenty thousand acres, and is part of a larger body surveyed for Wilhelm Willink and others, composing the "Holland Land Company," in pursuance of warrants from the Commonwealth of Pennsylvania issued in the years 1792, and 1794.

The title to these lands by sundry mesne conveyances became vested in Benjamin R. Cooper, who, to secure the purchase money to the original warrantees, on the 3d day of May, 1816, executed and delivered a mortgage covering the whole to the said Holland Land Company. This mortgage remaining unsatisfied in the year 1829, a *scire facias* issued upon the same out of the District Court of the United States, and after the rendition of a judgment the whole of the lands were exposed to sale by the Marshal of the District by virtue of a *levi facias*, and were purchased by the Holland Land Company, to whom the said Marshal, on the 6th day of May, 1830, executed, acknowledged, and delivered his deed; by means whereof the said Holland Land Company became reinvested with the title to their original warrants. Thus the title and possession continued until the 2d day of February, 1831, when acting by their legally constituted attorney in fact, the late John I. Vander-

kemp, Esquire, of Philadelphia, the said Company granted and conveyed the same body of lands to Benjamin Jones, Andrew M. Jones, and Mark Richards in fee simple. The said Mark Richards afterwards becoming embarrassed, his estate was on the 10th day of April, 1834, granted and conveyed to John Hemphill and others; who, by their deed of the 25th day of April, 1835, granted and conveyed the same to Benjamin Jones. In this family the title remained after the death of Benjamin Jones and until the 14th day of January, 1853, when Andrew M. Jones and Anthony S. Morris, executors and devisees in trust under the will of Benjamin Jones, deceased, and Andrew M. Jones and wife, in their own right, united in a deed of conveyance of the same lands, with certain exceptions therein mentioned, to William A. Irvine, of Warren County, Pennsylvania. This purchase being made by Doctor Irvine, in trust for himself, Thomas Struthers, Henry M. Watts, and Samuel M. Leiper, as tenants in common, in equal parts, in fee simple, the said William A. Irvine, on the 20th day of December, 1854, by deed granted and conveyed an equal undivided fourth part thereof to Henry M. Watts, and by his two deeds, the first dated the 14th day of January, 1854, and the second dated the 30th day of December, 1854, granted and conveyed his own fourth part, and the fourth part he held in trust for Thomas Struthers, so as to vest the undivided moiety of the whole lands in Thomas Struthers. Thomas Struthers and wife then, by their deed dated the 25th day of May, 1855, granted and conveyed all his estate, being the aforesaid undivided moiety in said lands, to John K. Kane, Frederick Fraley, and John C. Cresson. The

three last named persons associated with them in the purchase by declaration of trust, Samuel Mason, John Livezey, Joseph Cresson, Jeremiah Hacker, Mordecai L. Dawson, Samuel Welsh, James R. Greeves, J. Pemberton Hutchinson, and William Biddle.

In the mean time Samuel M. Leiper, whose undivided fourth part in the said lands still remained in Dr. Irvine as trustee, died, having first made his will and testament appointing the persons hereinafter named his executors, and without having made any specific devise of his estate in said lands.

There being thus fourteen owners of undivided and unequal estates in the said lands, and of whom one, Samuel M. Leiper, was dead, leaving executors without power over his real estate, and it being deemed advantageous to all, and productive of great good to the Commonwealth, it was determined to apply to the Legislature of Pennsylvania for a Charter of Incorporation.

This was granted on the 6th day of February, 1856, and a copy of the same is hereunto prefixed and explains itself. No other remarks are necessary than that upon the submission of the same to the Corporators named therein, it was unanimously accepted, and the Company organized in conformity thereto by the election of seven Directors. These facts being duly certified to his Excellency the Governor of Pennsylvania, a patent, under the great seal of the Commonwealth, was issued conformably to the statute, and is also hereto prefixed.

The proprietors of said lands have, by their deeds dated the 19th day of March, 1856, united in granting and conveying all their estate in said lands to the

McKean and Elk Land and Improvement Company, incorporated as aforesaid, and the said Company have, in consideration thereof and in pursuance of the statute, agreed to issue now and hereafter to the said proprietors individually certificates of shares of Stock, in the ratio of their respective interests in the lands, and so that the whole number of shares shall correspond precisely with the number of acres conveyed to the said Company. Of these, however, the proprietors have with a commendable forecast, agreed to transfer to the Company about twelve thousand shares, in order to raise a capital, to be expended in the improvement of the estate and the construction of railways. This policy adopted at the start, will enhance the value of the stock, and insure improvements without taking any of the proceeds of the sales of lands, and without invoking the aid of the stockholders.

Having thus succinctly brought to your notice the origin and progress of the title to the lands, which now, under the authority of the law, are held by your Corporation, and to be offered to the public for sale or on lease, for the construction of railways, for the development of the minerals, the sawing of the timber trees, the general improvement and peopling of this most interesting section of our State, it is necessary to add that the title to each tract of land has been consummated by a patent, and is believed to be perfectly indefeasible.

Still you are desirous of having a general description of your estate from the Board, whose knowledge of a vast area of country thickly covered with forests, and supposed to contain inexhaustible mines of iron ores

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and mineral coals, is very imperfect. Relying most upon the intelligence of others, we proceed:

DESCRIPTION.

These lands lie in a compact body in the townships of Hamlin, Sergeant, and Shippen, in the county of McKean, and in Jones and Benzinger in the county of Elk. They are northwest of the slope of the Alleghany ranges, and in that section of Pennsylvania where the tributaries of the Susquehanna and Ohio Rivers, which flow east and west into the Atlantic and Gulf of Mexico, have their sources on the same summit level. It will be understood, therefore, that the lands are not stony and mountainous, but form an elevated plateau, and as their surface is deeply intersected by watercourses of greater or less volume which have been rolling along unchecked for thousands of years, they would bear the appearance, to a person standing in the bottom of a valley, of being hilly. The most important of these streams are the Driftwood branch of the Susquehanna, the east and west branches of the Clarion, West Creek, Marvin, Kensua, and Mill Creeks.

In 1854 a careful and accurate survey was made, by a competent party, of all the Tracts; the lines of the surveys of 1792, 4, were retraced and refreshed; each warrant subdivided into four parts; the lines distinctly marked on the trees; the number of the original warrants and of the subdivision plainly scratched with marking irons; the contents of each part ascertained, together with the courses of the streams, and other important facts noted, and all are now engrossed in a general plan of the survey.

The surface consists of a sandy loam, with a thick covering of two or three feet of vegetable mould, and is sufficiently undulating for all the purposes of beauty, health, drainage, and cultivation. The strength and fertility of the soil being evident from the prodigious growth of trees in the greatest variety. The Beech, Maple, Cherry, Birch, White Wood or Poplar, Cucumber, Oak, Chestnut, Pine, and Hemlock abound. Many of these measure from two and a half to three feet in diameter, and eighty feet in height without a limb. Of these most valuable trees, for all the purposes of building houses, vessels, and manufacturing of cabinet ware, fencing, bark for tanners, &c., one would suppose there was enough to supply the demands of trade and agriculture for a century. The water power of the creeks affords the most eligible sites for saw-mills, factories, furnaces, and other manufactories. The farms that are opened produce wheat, rye, oats, corn, potatoes, as abundantly as the more famous Genesee Valley, lying to the north of them; and the cattle fatten readily on the spontaneous grasses. The air is pure and salubrious, not in any degree affected with the miasmatic vapors that float over the Western States and in many other parts of our own State, bearing disease and death upon their invisible wings. Nature has, indeed, poured into the lap of this country plentifully, and invites all cheerfully to partake of her bounties.

But while it is conceded that an agricultural and pastoral life conduces much to the good morals and happiness of the people and promotes the general wealth of the State, a nation is not truly intellectual, great, and independent, that does not contribute, by the develop-

ment of its minerals and the establishment of manufactures, to the encouragement of Agriculture and the promotion of Commerce. / It is with this view that we ask attention to the position and geological features of this region. Looking to effects of the discovery of the coal formations in the eastern belt of Pennsylvania upon the tonnage and commerce of Philadelphia (being now equal if not greater than the whole foreign commerce of New York), we can conceive what will be the operation of the development of the coal fields of McKean and Elk Counties, not only upon that portion of our own State, but upon the whole southwestern section of New York, the commerce of the Great Lakes, and of the cities of New York and Boston. The high premiums offered by the Legislature of New York for the discovery of mineral coal, show how quickly they would avail themselves of these sources of wealth, if within their boundaries and accessible to their capital and enterprise.

At home, the development and conversion of our mineral wealth to the industrial interests of society has been long the favorite policy of the State, and has contributed more than any other to her pre-eminence among her sister States. General laws, with ample provisions for the investment of capital in a corporate capacity, now exist, under which Associations may be formed for mining and manufacturing of the minerals, and for transporting them to market.

This region is comprehended in the scope of that vast northeastern and western coal formation, extending from the Lehigh River, along the head waters of the Schuylkill, the northern and western branches of the Susquehanna, through McKean and Elk Counties, along the

Alleghany River to the city of Pittsburg, and thence along the borders of Ohio and Virginia, changing its qualities from the hard anthracite to the free burning bituminous and cannel coals.

That mineral coals are found in horizontal strata, and in almost every part of our lands, is made observable from the outcrop of the seams in the abrupt hills that skirt the rivers and creeks, and in the cavities of the earth left by the uprooting of the large trees by the storms. Openings are easily made, and in the northern tracts the measurements and results are ascertained to be—three veins—the lowest 20 inches, the second 3 feet, and the upper one $5\frac{1}{2}$ feet thick. This latter includes 20 inches of cannel coal, that can be easily separated from the bituminous in the taking of it out. In the southern tracts there are, in addition to the above, two other veins, each of three feet thickness, making in the aggregate 15 feet 8 inches. As the belt extends east and west, and these openings have been made in the north and south, it is a fair inference that the same strata underlie the greater part of the entire lands.

Within a few days past, information has been received from a most reliable source, that a vein of Cannel Coal of eight feet thickness has been developed at Bunkerhill, lying near the eastern line of our estate, and is supposed to extend through it. The various uses to which this is now applied, especially its conversion into oil, render this mineral extremely valuable.

It will be, perhaps, more acceptable to you, as it proceeds from a scientific source, and from persons not liable to the bias occasioned by interest, that you should

know what others think, and we therefore set forth the following:—

Several barrels of coal were taken by the Rochester and McKean County Coal Company from the central part of this body of land, and forwarded to the city of New York for analyzation and test; and Professor Chilton furnished the Company with the following certificate:—

“I have analyzed a specimen of the coal from Elk County, Pa., for the Rochester and McKean County Coal Company, and find it to yield the following:—

Fused Carbon,	58.87
Bitumen or Gas,	33.27
Water,	4.00
Ashes,	3.86
	—
	100.00

“This is a remarkably good quality of coal. It yields a good substantial coke, and its mode of burning resembles the best kind of Liverpool coal. The proportion of sulphur is very small.

(Signed) J. R. CHILTON, *Chemist.*

The results of an analysis of some of the same coal, by Professor Hayes, Chemist, of Boston, coincides perfectly with this.

The Manhattan Gas Company, New York, tested it practically for gas purposes; and certify the following as the result:—

“150 lbs. coal from Rochester and McKean County Coal Company’s Mine produced gas as follows:—

1st hour	145 feet
2d " "	153 " fair heat.
3d " "	155 " 1 bushel coke weighed 67 lbs.
4th " "	127 " Gas good.
5th " "	69 " 1 bushel coke weighed 34 lbs.
<hr/>	
	649 or 4 32-100 to the lb.

"This charge produced 3 bushels coke, weighing 102 lbs. One ton of 2,240 will produce 9,601 feet of gas, and 44 bushels coke weighing 1,560 lbs. The coke of superior quality."

These veins extend northward through Sargent and Hamlin, and into Lafayette Townships, McKean County. The Lafayette Coal Company have had tests made by distinguished chemists, and the same Gas Company, at New York, of coal taken from their lands, in Lafayette Township, and obtained similar results.

Professor James Hall, the eminent State Geologist of New York, made an examination of a portion of this coal field for the Lafayette Coal Company in the spring of 1853. Their location is in Lafayette township, bounding these lands on the North. The following extracts from his report to that company, of May 25, 1853, give his experience and enlightened judgment on the subject. He says: "The area here described, embracing coal north of the Kinzua, is much more extensive than any other portion of the coal fields of Pennsylvania so far north. All other basins of this latitude which are known east of this are isolated tracts, much smaller in extent and broken in character." "That portion of the measures succeeding the conglomerate, and occupying the tract under considera-

tion, consists first above the conglomerate of sandstones and shales, with a stratum of coal twenty inches in thickness; and which of course is not taken into account in estimating the quantity of coal on the property. To this succeed shales and sandstones, which are followed by a bed of workable coal THREE feet thick, and containing in its lower part a seam of valuable fire-clay, twelve to fifteen inches thick. Above this we have slate and sandstone for fifteen or sixteen feet, succeeded by a third bed of coal about *five and a half* feet in thickness, of which twenty inches are cannel coal. This bed in its turn is covered by shales and sandstones."

In an interesting lecture delivered to the citizens of Buffalo on the subject, Mr. Hall says: "At this point (Lafayette), within little more than eighty miles of Buffalo, there were five to ten thousand acres of land underlaid with two workable beds of coal. One of these beds has a thickness of three feet and the other five and a half feet. Within the latter is a stratum of cannel coal, twenty inches thick. Upon the tract he had been especially requested to examine (5,600 acres), he had estimated, there were about 40,000,000 tons of coal. This tract he said was not an isolated basin, but the northern extremity of one of the large basins forming a continuation with the great coal fields to the south and southwest. It was separated by the deep gorge of the Kinzua Creek, which has cut through the coal strata; still the strata on the north and on the south sides are continuations of the same beds as much as are the strata on the two sides of the Niagara River below the Falls." He stated that, "from the information he

had received, the average price of coal in Cleveland and Erie was about \$2 50 per ton, and that the coal of M'Kean County could be delivered in Buffalo at that price or even less, when the work (the Buffalo and Pittsburg Railroad) should be in full operation. The quality of this coal is very good; it is, he said, a dry, open-burning bituminous coal, burning with much flame and comparatively little smoke; not melting and coking in the grate, and on this account well adapted to steam boilers and manufacturing operations."

Market and Means of Transportation for this Coal.—On this subject we would recur to the very interesting report of Professor Hall to the Lafayette company. It will be seen that he has given the subject much attention and careful investigation. Although his statistics and arguments are given for the immediate benefit and encouragement of that company, holding a small portion of the northern extreme of the coal field of this section—they possess equal or greater interest in their application to the more numerous beds and larger supply to be found in the lands extending from their boundary fifteen or twenty miles south and southwest—the direction in which the great basin extends. In some respects the southern part of this tract has great prospective advantages over the Lafayette section in reference to transportation and market. Whilst the latter will have only the advantage of the width of their own tract, say two miles, on the Buffalo and Pittsburg Railroad when completed through, the former will have the advantage of the Sunbury and Erie Railroad, giving them an outlet to Erie at about the same distance as to Buffalo, and a direct connection with

Philadelphia, Baltimore, New York and the innumerable intervening towns and manufacturing establishments requiring this coal for gas and other uses, and the Alleghany Valley Railroad will connect them with the New York and Erie further east, and, in much less than half the distance to Buffalo with the Alleghany River at a point where the coal may be dumped into boats, and passed into the Genesee Valley canal. The expense of improving this part of the river would be very moderate. But to the report—Professor Hall says: “In looking to the north as the natural outlet for this coal, we find a large tract of country which thus far is but partially supplied from the Lake Erie ports, or still more imperfectly on its eastern and northern sides by the anthracite and the coal of Blossburgh. The anthracite of Scranton and of Lehigh reaches the larger towns by way of canals and railroads, but at a cost at least double that at which the M’Kean County coal can be supplied. We shall be able to show that the coal of M’Kean County is the most accessible of any hitherto explored for supplying all the State of New York west of the Genesee River, and to some extent east of that line, and we shall also show that the coal can be more directly and cheaply supplied from this quarter than from any other.” He then enumerates the railroads and canals, viz: The Buffalo and Pittsburgh Railroad, giving a communication with Buffalo in a distance of eighty miles; crossing the New York and Erie Railroad twenty-five miles from the coal beds, affording means of supplying coal east and west, and also crossing the Alleghany River; and by a few miles extension from this point may unite with the

contemplated Attica and Alleghany Railroad, opening another line of country to the coal, and intersecting other roads East and West at Attica. The Genesee Valley Canal and contemplated Genesee Valley Railroad are also mentioned as affording direct communication with Rochester, and connecting at that point with the great Erie Canal east and west.

“The fact that this portion of the State of New York is now but partially supplied or altogether unsupplied with coal is no argument against its consumption when it can be furnished at a cheap rate. A cheap and abundant supply of mineral fuel must eventually lie at the basis of our manufacturing operations, and so soon as coal of good quality and abundant in quantity can be supplied to the villages, towns and cities of Western New York, manufactories of all kinds will spring up and flourish. The absence of water-power will be supplied by the steam-engine, and new sources of industry and wealth will follow in the train of this abundant supply of fuel.”

We congratulate our Stockholders that at the present session of our Legislature, a special act has been passed incorporating a number of enterprising capitalists with a view of extending the above-named Buffalo and Pittsburg Railroad from the New York south line through our lands to intersect the Sunbury and Erie Railroad and the Alleghany Valley Railroad, and that another act will probably pass to construct a slack-water navigation in Potatoe Creek and the Alleghany River, so as to afford means of transportation to connect with the Genesee Canal.

He then speaks of that part of the State of New

York west of the Genesee River, with a population of more than half a million—having increased over twenty-eight per cent. from 1840 to 1850; its cities, towns, and almost innumerable thriving villages—their great variety of foundries and manufacturing establishments; many of which now use coal from Scranton, Blossburgh and Lehigh, and wood which is becoming scarce and dear. “The ordinary consumption of these places, he estimates at 500,000 tons per annum now, *exclusive* of that used for manufactories, locomotives and steamboats. In the manufacture of gas, Erie coal is used, but this is not satisfactory, and a better is needed for the purpose; the M’Kean County coal will supply this want.

“Lehigh coal is worth in Rochester \$6 12 to \$6 50 per ton by the boat load; it retails at about \$7 50. Scranton coal is sold at \$7 75, or varies from \$5 50 to \$6 25 per ton. Blossburgh coal is sold at \$5 00, or probably by the boat load at \$4 50—\$4 75. The Erie coal at wholesale, is \$4 60, and a poorer quality \$3 37; retailing at \$5 00. Pittsburg coal used to some extent for gas, is sold at wholesale for \$5 50 per ton. It cannot be expected that at these prices for fuel, manufactories can flourish; the average price is nearly *double* what it should be, and what it *would* be, were there direct lines of communication with the inexhaustible coal fields of Pennsylvania. The use of coal is rapidly increasing in Rochester, even at the present prices; and when the M’Kean County coal is introduced there at a price which will still yield a large profit to the Company (proprietor), it is easy to see that it will supplant all other bituminous coals, and to a great extent, the anthracite; while the low price will induce an exten-

sive consumption in manufactories which are now carried on for want of this very fuel.

“The ports on the upper lakes, other portions of Western New York east of the Genesee River, the ports bordering on Lake Ontario and the St. Lawrence and those portions of Canada, in the same relation and situation to the lake and river, may all be supplied from this source more cheaply than can be done at the present time from any other. The area over which it may be distributed, and with greater or fully equal advantages with other coals, may be estimated as four times larger than Western New York, and containing a population of nearly two millions of inhabitants.

“It cannot be long before it will be found necessary to use coke on the railroad lines passing through these portions of the country where the forests are rapidly diminishing, and where wood must soon become scarce and dear.

“Looking, however, only to Buffalo, and the market for coal at this place and in same direction, we see a demand quite sufficient to keep in activity all the force that can be employed upon these mines.”

By statistics found in the same valuable report, it is shown that the consumption of coal by steamboats on the upper lake in 1853, was 1100 tons per day during the season of navigation, or 200,000 per year. That used for same purpose on Lake Ontario not included; but probably nearly an equal amount would be used there as soon as this coal can be delivered to them at Lewiston, Oak Orchard, or through Rochester. It is exclusive, too, of the supply which may be furnished to the Lake ports, to Canada and Northern New York.

The domestic consumption of coal in Buffalo was set down at 60,000 tons per year, at the high prices it was then costing them, and her market as presenting a demand for 460,000 per year. By this data some faint idea may be obtained of the immense quantity which the wants of the large number of cities, towns and villages and extensive expanse of country to be supplied from these coal fields will require. But the increase prospectively can scarcely be imagined.

“The history of the coal trade in every part of the country, shows that the increase of consumption has been governed by no ordinary rule; it has far outstript the natural increase from increase of population, and advanced at a rate that no one could have anticipated. Mr. Taylor has shown that the consumption of anthracite in 1820, was but 365 tons, and that, in 1846, it had reached 2,982,309 tons; and that in ten years after its use was fully established, from 1837 to 1847, the increase was from 724,539 to 2,982,309, or more than four times in a period of ten years. In the absence of other than partial facts, we may estimate that the demand for bituminous coal in Northern New York, and from steamboats on the lake, will be more than quadrupled in ten years. In 1825, the quantity of coal consumed in Pittsburg was 35,794, while in 1845, it had reached 454,286 tons; thirteen times as much as in 1825. At that time the population of the city was less than 50,000. At the present time, taking the same rate of increase, the consumption has increased to more than 2,000,000 of tons.”

The coal necessary for gas in New York, Boston,

Albany, and other northwestern cities and towns, cannot be so advantageously supplied from any other source.

As the smelting of iron ore is now extensively produced, both in Europe and the United States by the consumption of coal, and the gases thereof with the use of limestone as a flux, it adds vastly to the value of our estate, that both iron ores and limestone have been found of excellent qualities throughout the whole region. Sufficient explorations have not yet been made to enable us to give even a proximate estimate of the quantities. It is satisfactory to know that they abound in strata overlying and underlying the coal. One of the veins is of four feet thickness, intermixed with earth and gravel, and yields about forty-seven per cent. of metal. Another of only twenty inches of gray ore is remarkably rich, and yields seventy per cent. Furnaces are now projected near Smithport, the seat of justice of M'Kean County, which, when in operation, will draw our attention to this subject.

Numerous salt springs have been long known and used on the Driftwood branch, and are considered very valuable.

On this and other topics of like concern to us all, we have derived much information from a comprehensive and detailed report, made by Jedaiah Irish, Esquire, of Schuylkill County, to the Sunbury and Erie R. R. Co., by whom he was commissioned to make an exploration and examination of the estate, with a view to the purchase of a part thereof, and before our Company became the owners of it.

For this report we are indebted to the politeness of Mr. Irish, and commend it to your careful consider-

ation, proceeding as it does from a person highly distinguished for his experience and knowledge of the coal measures of Pennsylvania, and for his practical science of the geology and mineralogy of our State. He and his party encamped several weeks upon our lands, and are certainly free from any imputation of bias in favor of the owners of the lands. We append it as received entire:—

On behalf of the Board of Directors.

JOHN C. CRESSON,

President.

Attest:

W^M. BIDDLE,

Secretary.

POTTSVILLE, Nov. 25, 1854.

Hon. JAMES COOPER,

President, S. & E. R. R. Co. :—

In accordance with your instructions of the 10th ultimo, I proceeded to Elk County for the purpose of examining the estate of Wm. A. Irvine, Thos. Struthers, Henry M. Watts, and Samuel M. Leiper, lying in Elk and M'Kean Counties, a map of which is hereunto annexed.

On arriving in Jones Township, in which the largest portion of the estate is situate, my attention was immediately directed to the Clarion River, it being the largest stream passing through the estate, consequently cutting deeper, and laying bare more of the strata, than any other stream.

I commenced my examination at the southern boundary line of the lands on Crooked Creek, from thence along the east branch of the Clarion, examining the strata on both sides of the river.

I then proceeded to examine the country between the east branch of the Clarion and the Milesburgh and Smethport Turnpike, following along Johnson's and Sweet's Runs.

On Johnson's Run opens a field of vast geological importance, from the fact of its being a proper index to the whole country north to the head-waters of Marvin's Creek and the several branches of the Kenzua, and west to the waters of Tionesta and Mill Creek.

Between the Clarion and the Turnpike on the waters of Johnson's Run, in a perpendicular height of not more than two hundred feet, are found six veins of coal, three regular, stratified veins of iron ore, and one stratum of limestone fifteen feet in thickness.

The coal veins are, in thickness, as follows: Twenty inches, five feet, two of three and one-half feet each, one of four feet, and one eighteen inches—thus making, in all, nineteen feet two inches of coal. Will yield nineteen thousand tons of coal per acre, of a quality equal, if not superior, to any coal in our State for making gas. This coal will not only find a market in New York and Philadelphia for gas making, but in all the large towns in Western New York, for the same purpose.

This may be objected to on account of the coal of Lafayette and Bunker Hill being situate further north and east, but it should be borne in mind, that the coal at the two latter points are, near the out-cropping of the coal fields, of a semibituminous character, and therefore unfit for gas.

While on the subject of coal, it is proper to state, that the coal is found in the several tributaries of the west branch of the Clarion; also exposed on the table-lands by the turned-up roots of wind-fallen trees, thus proving, beyond question, its extension throughout the Western portion of these lands.

The seven thousand acres lying north of Williams-ville, may be considered equal in quality to a fair average of the lands west of the west branch of the Clarion River, with the exception of being more cut by streams. The formation of this whole estate west of the east branch of Clarion River, is remarkably regular,

never having suffered from volcanic action, nor materially injured by subsidence. The lands lying east of the east branch of the Clarion River are very much denuded.

Those tracts lying and extending from the south fork of the north branch of Straight Creek to the east line of the estate, do not contain coal, and from thence along the waters of West Creek I consider doubtful—so much so, that I do not feel justified in saying that more than one-third of this body of land contains coal.

I will now consider the iron, as being next in order.

The lower vein of iron ore is situate immediately below the rock on which the bottom vein of coal rests, and is three feet in thickness. This vein has been long and favorably known as extending throughout the whole bituminous coal formation of this State. It fluxes easily, yields forty per cent. in the furnace. Iron of excellent quality, and was, by the late Richard C. Taylor, denominated the white ore.

The second vein of iron ore is found between the third and fourth coal veins, is four feet in thickness, will be found to yield over fifty per cent., but contains some silex, though not so much as to injure it materially. I do not think it contains one-half the quantity found in the hard ore worked by the Montour Company.

The third and last vein known in this estate, rests upon a stratum of limestone, and below the top seam of coal. Fifteen inches of this ore are about one-half iron, and the other half lime, with from twelve to fifteen inches of hematite, one lying on the top, and in immediate contact with the former.

This is sufficient in quantity for all practical purposes. But, from the large quantity of peroxide of iron in the small streams, and in all the low, marshy, and also from the fine specimens of bog ore that I found, the conclusion is irresistible that much more exists, and I have no doubt but further developments will prove the correctness of this opinion.

In concluding this subject, I may say, with justice to myself, that I have never examined any estate which affords so great facilities for the manufacture of iron as the one in question. This iron will find a market at Pittsburg, and Western New-York, by the Alleghany Valley Railroad, or at Erie, and the Atlantic cities, by the Sunbury and Erie Railroad, as the demand and price may give preponderance.

This estate is heavily timbered, consisting of hemlock, poplar, birch, beech, maple, cucumber, and cherry.

There is no part of the estate that can properly be called pine-lands, excepting ten thousand acres forming the southeast corner, consisting of warrants numbered as follows: 2,486, 2,507, 2,439, 2,442, 2,425, 2,377, 2,361, 2,363, 4,904, and 4,905. These ten tracts will yield of pine, of a good quality, twenty thousand feet board measure per acre, and an equal quantity of hemlock, and would doubtless sell, at the present time, without further improvement or development, for a larger price than any other *connected* ten tracts of the whole body, although their intrinsic value is not as great, not being a fair average in point of mineral wealth, or in quality for the purpose of agriculture.

The hemlock timber is found along and contiguous to the streams, and is of good quality, not having

arrived at that age which renders hemlock brash and worthless. This class of timber will yield between forty and fifty thousand feet per acre of sawed lumber, besides large quantities too small for sawing, which will be valuable for, and is destined to be used, as props, couplings, pillars, &c., in the mines of the vicinity in which it is growing. Hemlock is used for fencing and joists, rafters and studing, in building, and the time is not far distant when this timber will bear transportation on railroad to Lock Haven, from whence it will be taken, in boats, to market. It is now worth, at this place (Pottsville), seventeen dollars per M. feet. There is another value that may be justly attached to this timber. The want of bark is forcing the large tanners into the interior of the State, the hides and leather being the lighter transportation, it must necessarily be taken to the bark; and when this estate is opened up by railroad, much of this hemlock land will be worth from fifteen to twenty dollars per acre for the bark alone.

The birch, poplar, and cucumber timber, is not confined to any particular locality. It is found along the streams with the hemlock, and also upon the table-lands and ridges with the beech, maple, and cherry.

The poplar timber on this estate is of large growth, and good quality. This timber is used for settee and chair bottoms, bedsteads, and cabinet work. The cucumber is used for the same purposes, though a superior wood in firmness of texture and durability.

This class of timber will bear transportation on railroad, and large quantities will find a market in the Atlantic cities as soon as the estate is opened by railroad. The cherry timber is confined principally to the

highest ridges, though not entirely so. Occasionally, it is found on the table-lands of the estate.

This timber is remarkable for its large growth and good quality; many of the trees are two and a half and three feet in diameter, and seventy and eighty feet without a limb. It is standing in isolated parcels, occupying the same ground with beech and maple; some acres of which will yield ten thousand feet per acre, and other acres not more than four thousand: say an average of seven thousand feet per acre on that portion of the lands on which it is found. This timber and birch are of equal value, being used, by cabinet-makers and stair builders, for the same purposes. It sold last spring, in Cincinnati, for thirty-five dollars per thousand, and is probably worth forty dollars per M. feet in Philadelphia. There is more maple timber on this estate than there is of cherry, much of which is curled and bird-eye. This is more valuable than cherry, and will bear transportation on railroad. There is also a large quantity of beech timber, much of which will find its way over the railroad to the large cities. It is used for all parts of a chair excepting the bottom; also for carpenters' plane stocks, brush blocks, knife, file, and other handles.

Having given a description of the various kinds of timber and minerals, we will now consider the soil of the estate, and its adaptation to agricultural purposes.

The lands through which the east branch of the Clarion River passes, is washed deep, and, consequently, broken, and hill-sides precipitous—too much so for cultivation. The same remarks will apply to a part of two tracts extending across the Driftwood branch, and numbered

2,332 and 2,333. The tract No. 2,527, including the mouth of Strait Creek, is also broken along the creek, as on the river.

All the other land is susceptible of cultivation, and $\frac{4}{5}$ ths of it good farm land. There are occasionally four or five acres of stony land, but, in general, there is a want of stone upon the table-land and ridges.

The soil is made up of decomposed sandstone and decayed vegetable matter, and is deep, many of the windfallen trees having turned it out to the depth of three feet. This soil is not only good for grazing, but is admirably adapted to all kinds of roots and succulent plants, and the German farmers in the neighborhood are growing as good wheat as is raised in Western New York, in the same latitude.

I have stated above, that some of the hemlock land will yield sixty thousand feet per acre of sawed lumber, and that the pine lands would yield twenty thousand feet of pine lumber per acre, and an equal quantity of hemlock. This is no exaggeration, and I did not pass over a single acre that will not yield more than ten thousand feet of sawed lumber. In making out the whole quantity, I will adopt the minimum.

Ten thousand feet per acre, or seventy-eight thousand acres, is seven hundred and eighty millions of feet.

It is proper for me to remark here, that I was informed by Mr. Alonzo Wilcox, of Elk County, a gentleman of respectability, and largely engaged in the lumber business, that he, last spring, ran three hundred thousand feet of birch and cherry lumber to Cincinnati, for which he received thirty-five dollars per M. feet; and that the cost of manufacture and running did not exceed ten

dollars per M. feet, and that he made a net profit of twenty-five dollars per each thousand feet.

With the birch and cherry timber on this estate, I will endeavor to be as moderate in quantity as in price, and say that there is only birch and cherry sufficient on the whole estate, to cover four thousand acres at the minimum quantity per acre, and I will fix its value at five dollars per M. feet.

4,000	acres, 10,000	feet per acre, 40	mil-
		lions of feet, that, at five dollars per	
		thousand, is	\$200,000
100	millions of pine,	at \$2 per M. feet.	200,000
70	" poplar,	at \$3. " "	210,000
150	" maple,	at \$2 " "	300,000
80	" beech,	at 25 cts. " "	20,000
340	" hemlock,	50 " " "	170,000
	78,000	acres of surface, at \$3 per acre .	234,000

	Total	\$1,334,000

In calculating the value of the minerals, I will lay aside the iron ore and limestone (which I consider equal in value to the coal), and also fourteen feet of coal, and base my calculations on five feet of coal only. The fact that coal seams lying horizontal, will yield a thousand tons per acre for each foot in thickness, and leave a large allowance for waste in mining, has been long known and established, both in England and this country.

The lowest rent I know of for the most remote mines, is twenty-five cents per ton to tenant making all improvements.

I will put the rent at five cents, and allow the five

feet of coal to be in one-half of the whole estate. Five feet of coal will yield five thousand tons per acre.

5,000 tons, at 5 cts. per ton, is \$250.	
39,000 acres, at \$250 per acre, is . . .	\$9,750,000
Timber and land surface	1,334,000

	\$11,084,000

This is a large sum truly, but I have given you the facts and data upon which my calculations are based. Whether my valuation is too great, nominal, or fictitious, is a question of time only. That is, when can labor be applied to the estate productively? The timber is worthless while standing. The mineral worthless while sleeping in its primeval forest, and the surface a tax upon the owners. But, when this estate shall be opened up by railroads, so that labor can be applied to it productively, and the lumber and mineral set in motion, my valuation will then appear nominal as it truly is.

I gave this estate as thorough an examination as the time would admit, and that, too, under as profound sense of the responsibility resting upon me, and of the great importance of my arriving at a correct knowledge of the facts relating to the estate, and I now cheerfully submit the result of my observations to your better judgment.

(S'g'd) Respectfully yours,
 JEDAIAH IRISH.

